

## Intermediate Guidelines and Instructions for Lab Notebooks

### Ownership

This laboratory notebook is the property of [Organization Name]. Unless currently archived, the care and maintenance of this notebook and its associated files are the responsibility of the notebook's author or the last person charged with its care. Immediately report any damage or loss of notebook material to laboratory management

### General Notebook Use

The purpose of this notebook is to provide a thorough record of your research progress and document your scientific thought. The notebook should provide enough details to enable other scientists to repeat your experiments and acquire the same results. The following guidelines can help meet this requirement:

1. Each entry should record (A) the title and date of the experiment, (B) the introduction and purpose of the experiment, (C) The experimental plan/procedures, (D) observations and data, (E) discussion, and (F) conclusions. More information about notebook organization is included below.
2. All entries should be written in ink and erasures are prohibited. To correct a mistake, draw a single line through the inaccurate notebook material along with the date and your initials. Use of Wite-Out or scribbling out errors is prohibited.
3. Data and observations should be written directly into the notebook. Recording on loose scrap paper should be avoided. If paper is used, it should be signed, dated, and securely attached to the notebook as soon as possible.
4. Entries should be signed by the author and an independent witness as soon as possible to verify authenticity.
5. Blank space should be limited throughout the notebook to help safeguard it from tampering. Overlooked blanked pages or space should be marked out with an "X" or a signature and a date.

6. Page numbers must be consecutive throughout the notebook and entries should be presented in chronological order.

7. Never edit or remove old entries from the notebook, even if the data is discovered to be outdated or incorrect. Address these issues in a new notebook entry

8. Submit notebooks to storage after the author's position in the lab is terminated, a project is completed or discontinued, or the incomplete notebook is left unused for two years.

9. Other types of entries not related to scientific experiments can also be recorded into this laboratory notebook. Some possible alternative entries include recording meeting minutes, original ideas, inventions, training records, and surveying literature.

### Basic Notebook Organization

Notebook entries should be organized, thorough, and enable other scientists to replicate findings. Notebook entries describing experiments can be arranged in the following format to meet these requirements:

1. Title Information—Each entry should have a clear title, date, and indication of the project the experiment belongs to.
2. Introduction/Purpose—Notebook entries should state the reason for the work that is being done and what similar studies have already been conducted, either by the researcher or elsewhere in literature.
3. Experimental Plan/Procedures—Describe the steps you intend to carry out and what materials are needed. Include any calculations or relevant safety information.
4. Observations and Data—Each entry should include observations made during the experiment along with raw and analyzed data. Observations should be detailed and objective.

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5. Discussion—In this notebook section, thoroughly reflect on the experiment. Describe your interpretation of the data and whether or not it fits your hypothesis.

6. Conclusions—Summarize the goal of the experiment and your results. Reexamine what work was done, what should have been done, and what should be done next.

## **Other Notebook Organization**

Additional sections of this notebook can be utilized to increase the accessibility and organization of your research records:

1. Table of Contents—This mandatory table in the front of the notebook provides a quick reference to experiments and associated data. The table should be kept updated and include the experiment date, title, and page number in the notebook.

2. Notebook Information—This section is included in the front of the notebook and contains general information about the notebook.

3. Preface—This notebook section is optional and can be included in the first few pages before formal entries. The preface contains information about the notebook's author, the research and projects covered in the notebook, and any other relevant background information.

4. Table of Abbreviations—This section is incorporated into the back of the notebook. It provides a reference list for abbreviations, symbols, and other shorthand commonly used throughout the notebook.

5. Accessory Data Locations—This section is also incorporated into the back of the notebook. It offers a list of physical and/or digital locations of raw data associated with the notebook.